



## State of Wisconsin \DEPARTMENT OF NATURAL RESOURCES

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October 8, 2002

Mr. Donald Brisch Rockwell Lime Company 4110 Rockwood Road Manitowoc, WI 54220



FID # 436034390

SUBJECT: Letter of Inquiry - Nitrous Oxide Emissions

Dear Mr. Brisch:

I have not yet received an engineering study from you in preparation for combustion optimization on lime kiln #2. The kiln may be subject to the new combustion optimization requirements of NR 428.05(2)(a)4, Wis. Adm Code, because it is located in Manitowoc county and has a maximum heat input rating of 87.5 MMBTU. The rule requires that by December 31 of each year, the combustion efficiency of the lime kiln is optimized to minimize nitrous oxide (NOx) emissions, if the capacity factor between May 1 and September 31, of the preceding year, exceeds 20 percent. Combustion optimization include activities necessary to maximize combustion efficiency while minimizing NOx emissions. These activities include but are not limited to the following: burner adjustments, fuel condition, fuel flow improvements, furnace design modifications and the application of combustion controls. The optimization needs to establish a relationship between NOx emissions and monitored parameters, through one or more stack tests.

Monitors may also need to be installed and operated to measure the parameters. The rule, under NR 439.096, Wis. Adm. Code, also calls for submittal of an engineering study on the kiln, 45 days prior to the optimization.

By October 31, 2002, please submit to me the following.

- Provide the 2001 capacity factor for lime kiln #2. The factor should be calculated as follows:
   Capacity Factor = [Actual total heat input during the 2001 ozone season/Maximum Heat Input during the 2001 ozone season] x 100, or
   Capacity Factor = [Heat input from all fuels burned between May 1 and Sept. 30, 2001/87.5 MMBTH x 24 hr/day x 153 day] x 100.
- 2. If the capacity factor exceeds 20 percent, provide an engineering study and proposal to optimize emissions. The proposal should include a date for measurement of NOx emissions and outlet carbon monoxide or oxygen at several loads. If you have any questions I can be reached at 920/492-5794.

Sincerely,

James G. Crawford, P.E. Environmental Engineer

Air Management

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